

WHAT IS CLAIMED IS:

1. An optical recording device which performs recording on an optical recording medium having a plurality of differently characterized tracks, comprising:

recording condition determining means for determining recording conditions to be used in recording with respect to at least one track selected from the tracks, by performing test writing with respect to the track thus selected;

recording condition computing means for performing computation in accordance with computation-use information based on the recording condition determined by the recording condition determining means, so as to determine recording conditions to be used in recording with respect to a track other than the previously selected track;

track switch means for switching tracks to be used for the test writing; and

computation-use information managing means for providing the recording condition computing means with the computation-use information and correcting the computation-use information, when the track switch means switches the tracks, based on respective results of test writing before and after the switch.

the optical recording medium is made of a substrate provided with a guiding track composed of a land which is a convex portion and a groove which is the guiding track, and the land and the groove are the tracks, respectively.

the computation-use information managing means includes preparing means for preparing the computation-use information by performing test writing with respect to the tracks.

the computation-use information managing means includes recording means for writing the computation-use information into the optical recording medium.

the computation-use information managing means includes obtaining means for reading the computation-use information out of the optical recording medium.

6. The optical recording device set forth in Claim 1,  
wherein:

the optical recording medium is a multilayer  
recording medium having recording layers as the tracks.

7. The optical recording device set forth in Claim 6,  
wherein:

the computation-use information managing means  
includes preparing means for preparing the computation-  
use information by performing test writing with respect  
to the tracks.

8. The optical recording device set forth in Claim 6,  
wherein:

the computation-use information managing means  
includes recording means for writing the computation-use  
information into the optical recording medium.

9. The optical recording device set forth in Claim 6,  
wherein:

the computation-use information managing means  
includes obtaining means for reading the computation-use  
information out of the optical recording medium.

10. The optical recording device set forth in Claim 6,

wherein:

the optical recording medium has the two recording layers.

11. The optical recording device set forth in Claim 6, wherein:

the optical recording medium has the three or more recording layers.

12. An optical recording device which performs recording on an optical recording medium, a substrate of which is provided with a guiding track composed of a land which is a convex portion and a groove which is the guiding track, both the land and groove being recording/reproducing tracks, the optical recording device comprising:

recording condition determining means for determining recording conditions to be used in recording with respect to a first track which is selected from the land and the groove, by performing test writing with respect to the first track;

obtaining means for reading computation-use information for a second track which is a track other than the first track out of the optical recording medium; and

recording condition computing means for performing

computation in accordance with the computation-use information read out by the obtaining means based on the recording condition for the first track determined by the recording condition determining means, so as to determine recording conditions to be used in recording with respect to the second track.

13. An optical recording method of performing recording on an optical recording medium having a plurality of differently characterized tracks, comprising the steps of:

(i) determining recording conditions to be used in recording with respect to at least one track selected from the tracks, by performing test writing with respect to the track thus selected;

(ii) performing computation in accordance with computation-use information based on the recording condition determined in the step (i), so as to determine recording conditions to be used in recording with respect to a track other than the previously selected track;

(iii) switching tracks to be used for the test writing; and

(iv) correcting the computation-use information, upon the switch of the tracks in the step (iii), based on respective results of test writing before and after the

switch.

14. The method set forth in Claim 13, wherein:

the optical recording medium is made of a substrate provided with a guiding track composed of a land which is a convex portion and a groove which is the guiding track, and the land and the groove are the tracks, respectively.

15. The method set forth in Claim 14, further comprising the step of:

preparing the computation-use information by performing test writing with respect to the tracks.

16. The method set forth in Claim 14, further comprising the step of:

writing the computation-use information into the optical recording medium.

17. The method set forth in Claim 14, further comprising the step of:

reading the computation-use information out of the optical recording medium.

18. The method set forth in Claim 13, wherein:

the optical recording medium is a multilayer

recording medium having recording layers as the tracks.

19. The method set forth in Claim 18, further comprising the step of:

preparing the computation-use information by performing test writing with respect to the tracks.

20. The method set forth in Claim 18, further comprising the step of:

writing the computation-use information into the optical recording medium.

21. The method set forth in Claim 18, further comprising the step of:

reading the computation-use information out of the optical recording medium.

22. The method set forth in Claim 18, wherein:

the optical recording medium has the two recording layers.

23. The method set forth in Claim 18, wherein:

the optical recording medium has the three or more recording layers.

24. An optical recording method of performing recording on an optical recording medium, a substrate of which is provided with a guiding track composed of a land which is a convex portion and a groove which is the guiding track, both the land and groove being recording/reproducing tracks, the method comprising the steps of:

(i) determining recording conditions to be used in recording with respect to a first track which is selected from the land and the groove, by performing test writing with respect to the first track;

(ii) reading computation-use information for a second track which is a track other than the first track out of the optical recording medium; and

(iii) performing computation in accordance with the computation-use information read out in the step (ii) based on the recording condition for the first track determined in the step (i), so as to determine recording conditions to be used in recording with respect to the second track.

25. A control program for operating the optical recording device of either one of Claims 1 to 12 and enabling a computer to function as the respective means.

26. A computer-readable recording medium in which the



control program of Claim 25 is recorded.

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